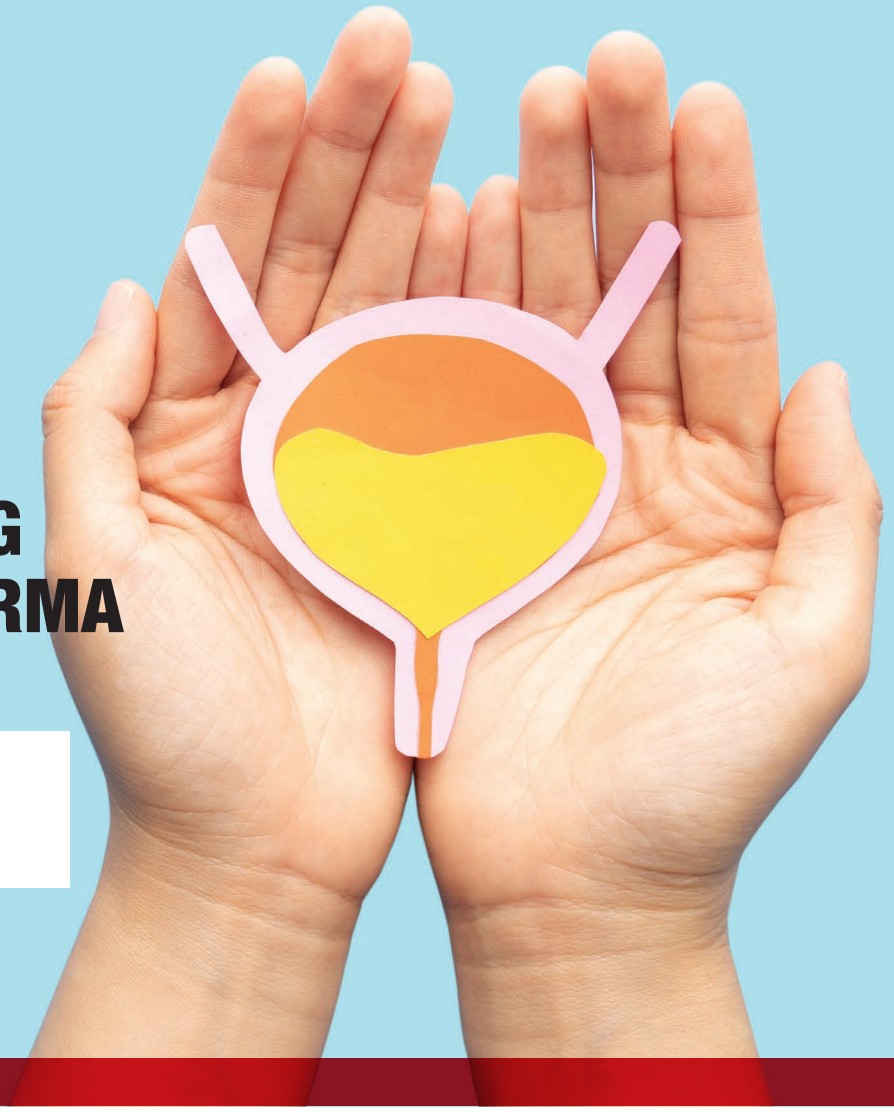
Scleroderma Quebec™

URINARY INCONTINENCE IN PEOPLE LIVING WITH SCLERODERMA



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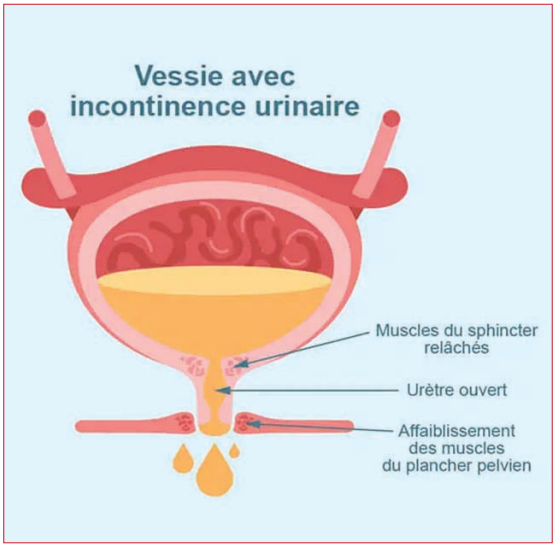
Urinary incontinence is defined as the involuntary loss of urine (Haylen et al., 2010). It affects 49% of women and 15% of men living with scleroderma (Sanchez et al., 2016). Several types exist, but the two most common are stress urinary incontinence and urgency urinary incontinence.

STRESS URINARY INCONTINENCE

Stress urinary incontinence occurs during physical activity or an action that increases pressure in the abdomen. This pressure pushes on the bladder and increases its internal pressure. When pressure in the bladder exceeds the urethral closing pressure (the tube leading out of the bladder), urine is propelled into the urethra, resulting in stress urinary incontinence. Coughing, sneezing, lifting loads, running, and jumping are just a few examples of factors that can cause stress urinary incontinence.

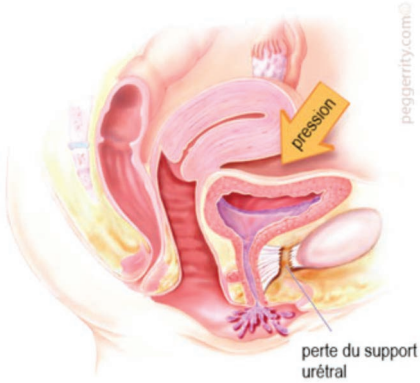
TWO IMPAIRMENTS ARE PRIMARILY RESPONSIBLE FOR THIS TYPE OF URINARY INCONTINENCE:

1. **IMPAIRMENT OF SPHINCTER FUNCTION:**
   This impairment is characterized by the inability of the pelvic floor muscles, smooth muscles (sphincters), and vascular elements of the urethral mucosa to close the urethra in a watertight manner. In addition, in postmenopausal women, the lack of estrogen leads to a reduction in tissue quality. The urethra becomes more rigid, which interferes with its occlusion. In these women, there is also a decrease in vascularization and in the production of intra-urethral mucus.
   To better understand this last factor, one can think of two glass slides held together by a drop of water. As long as the drop of water is present, the two slides are difficult to separate. However, if the water disappears, the two slides can be separated easily. As in postmenopausal women, scleroderma causes a decrease in intra-urethral mucus, affects the vascular plexuses, and stiffens the urethra, leading to insufficient occlusion (slides easily separated).



Source :
www.assura.ch/fr/sante/conseils-sante/incontinence-urinaire

2. **IMPAIRMENT OF SUPPORT FUNCTION:**
   This impairment is characterized by a lack of support of the urethra and bladder neck by active structures (pelvic floor muscles that are too weak or lack tone) and/or passive structures (fascia, ligaments) (DeLancey & Ashton-Miller, 2004). The urethra becomes hypermobile, which complicates the pelvic floor's task of compressing it against the pubic bone. Pregnancy and childbirth are examples of events that can affect support function.



Source :
uro-colmar.com/
incontinence-urinaire-feminine-bandelettes/

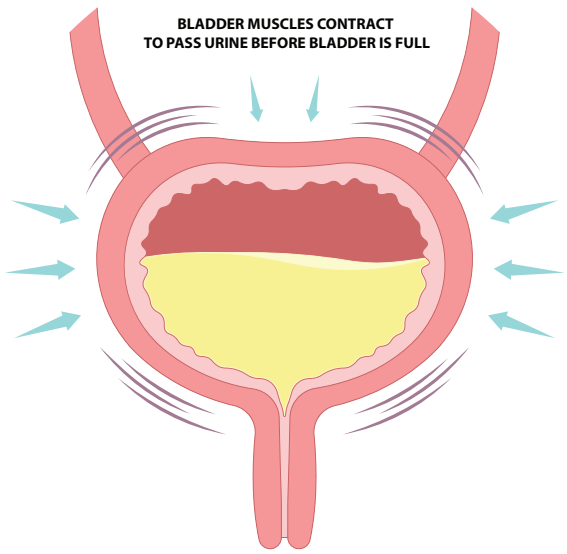
In people living with scleroderma, a third causal factor is added: myopathy of smooth muscles (urethral sphincters) and striated muscles (pelvic floor muscles). This may be caused by necrosis, inflammation, fibrosis, or acute neurogenic atrophy (Paik 2016). Smooth and/or striated myopathy compromises the watertight closure of the urethra, predisposing individuals to stress urinary incontinence.

URGENCY URINARY INCONTINENCE

Urgency urinary incontinence is associated with a sudden, compelling urge to urinate (Haylen et al., 2010), with urine leakage occurring while the person is on their way to the toilet. This phenomenon is explained by impaired bladder compliance.

Under normal conditions, the bladder can increase in volume (fill) without its internal pressure increasing proportionally (sensation of urge). However, scleroderma can cause bladder fibrosis, which decreases compliance and creates sudden, intense urges that result in urinary incontinence.

One study reports that 67% of people living with scleroderma experience urgent urinary urges that may lead to urgency urinary incontinence (Pacini et al., 2020). People who experience this type of incontinence are often able to identify triggering factors such as cold feet, running water, putting the key in the door, arriving at the bathroom/toilet, etc



OVERACTIVE BLADDER

Source :
www.health.harvard.edu/staying-healthy/tips-for-traveling-with-incontinence

MIXED URINARY INCONTINENCE

When the two types of urinary incontinence—stress and urgency—coexist in the same person, the individual is considered to have mixed urinary incontinence.

PELVIC FLOOR REHABILITATION

According to the International Consultation on Incontinence, pelvic floor rehabilitation is the first therapeutic option that should be attempted to treat urinary incontinence, well before medication and surgery (Dumoulin et al., 2016).

Pelvic floor rehabilitation is performed by a physiotherapist, a health professional recognized by Québec's public health care system and regulated by a professional order. The Ordre professionnel de la physiothérapie du Québec is mandated to monitor the quality of services provided by physiotherapists, to issue practice permits, and above all, to protect patients receiving physiotherapy care (www.oppq.qc.ca).

TYPICAL COURSE OF A PELVIC FLOOR REHABILITATION CONSULTATION

The physiotherapist first carries out a subjective assessment of the condition using a fairly comprehensive questionnaire, in order to differentiate stress urinary incontinence from urgency urinary incontinence and to identify potential causes.

Next, a physical assessment is performed, including—but not limited to—the pelvic floor muscles and deep abdominal muscles, to determine whether dysfunctions are present. If so, appropriate treatment modalities are implemented. As needed, an exercise program targeting muscular weaknesses is initiated, while taking care to respect muscular fatigue, which is often present in people living with scleroderma.

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In women for whom strengthening alone would not be sufficient to resolve stress urinary incontinence, the use of a pessary with a knob may be appropriate. A pessary is a silicone device inserted into the vaginal canal and can serve two roles: supporting the pelvic organs and closing the urethra. This latter function is made possible by the presence of a knob at the front of the pessary, which provides additional pressure on the urethra during increases in abdominal pressure. The physiotherapist is able to fit the pessary and provide follow-up care for the patient, once it has first been prescribed by the treating physician.

In cases of urgency urinary incontinence, the physiotherapist will teach urgency-suppression techniques and, as needed, in women, a support pessary may be inserted. If relevant, modifications to dietary and fluid intake habits will also be suggested.

Source :
www.canadapessary.ca/products/ring-pessary-with-knob-online

WHERE TO FIND PELVIC FLOOR REHABILITATION CARE?

On the website of the Ordre professionnel de la physiothérapie du Québec, a search engine allows you to find, in your region, a physiotherapist working in pelvic floor rehabilitation under the Care and Services section: (oppq.qc.ca/trouvez-un-professionnel/resultats/).

BIOGRAPHY

Olivia Dubois graduated from the Master's program in Physiotherapy at the Université de Sherbrooke, the graduate microprogram in pelvic floor rehabilitation at the Université de Montréal, and the PhD program in Clinical Sciences at the Université de Sherbrooke. A private-clinic physiotherapist for 14 years, she also holds the position of Director of Knowledge Mobilization at the Cigonia Clinic, ensuring a practice based on the most recent evidence. In addition, she is a lecturer at the School of Rehabilitation at the Université de Sherbrooke and a laboratory supervisor in the pelvic floor rehabilitation microprogram at the Université de Montréal. Finally, she is Executive Director of Professor Simon Décary's Research Laboratory on Health Care Integration at the Université de Sherbrooke.